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FROM VINEYARD TO WINE

In former times, good french cellars were built to maintain a temperature not exceeding 14 to 16°C in all seasons.

Today, this is rarely the case.

Nevertheless, a cellar worthy of the name must be protected against wide variations in temperature, be as damp as necessary and ventilated, dark and free of vibration.

This is why, for more than fifteen years, we have used the expertise of specialists and enthusiastic amateurs to design, develop, test and produce thousands of air-conditioners destined to help in the storage and ageing of wine.

If you follow our advice and respect our recommendations Winemaster will provide the optimal ageing conditions for your treasured wine collection.

You have to read the installation and operating guide for your FONDIS WINEMASTER cellar air-conditioner.

Contact us if you have any questions!

So... even if there may be long years to wait before the wine reaches perfection, the great day will come when you face the delicate job of uncorking.

Hold the bottle carefully – do not remove the capsule on a level with the mouth – use a good quality tool or lever – remove the cork without shaking the bottle and examine the "mirror"..

But that's another story...

SERVICE CLIENTS FONDIS

Tel. (0)389 377 500 / Fax (0)389 377 589

E-mail: contact@fondis.com

***Attention* : Wait for 24 hours before switching on the air-conditioner**

CHARACTERISTICS

	WINE C50IN
Setting the temperature	Preset to 12°C, adjustable between 4 and 15°C*
Maximum outdoor temperature	35°C**
Cooling power	1 200 W at 15°C **
Electricity supply	230-240 V - 50 Hz - with earth connection (supplied with 3 m cable)
Electrical power	950 W
Lighting	Fluorescent tube and switch built into the device
Heating power	500 W

The circuit breaker must be at least 16 Amps.

* The insulation quality and thickness has to be in accordance with the volume of the cellar and the set temperature.

** The cooling performance is dependant from the outside temperature. Therefore, the set temperature of 12°C for the cellar cannot be maintained if the outside temperature of the cellar is maintained at 35°C.

If the thermal safety functions to often, there is a risk for the condensator and starter to be damaged. In all the cases, it must be avoided that the outside temperature remains at 35°C.

This high temperature should be limited to the summer period.

1. LAYOUT OF PREMISES

The air-conditioner is installed entirely in the wine cellar: it can be fitted on the floor or on a suitable support which can bear the weight of the unit.

For a correct opération, the wine cellar reject outside some air arround 20°C, above aspiration temperature. This air si rejected in indoors well ventilated or outside the house.

This opération is made with isolated's ducts in the wine cellar.

1.1 HOT AIR OUTLET

- If the **WINEMASTER** hot air outlet is indoors, the room must be **well-ventilated** to ensure that the temperature does not exceed 35°C. The ideal temperature is arround 20°C. It is preferable to discharge the hot air outside if possible, via ducts.

- The air intake and outlet ducts must not be connected to each other nor obstructed, to avoid overheating the unit. The two openings (intake and outlet) must therefore be at least 200 mm apart. The maximum length of each duct must not exceed 10 metres. This lengh as to be reduced according to number of bends (1 meter per bend). **The radius of the bends must be upper than 300 mm. The diamter of the ducts musn't be reduced.**

1.2 THE CELLAR

1.2.1 INSULATION

Insulation of the 4 walls, the door, the ceiling and the floor is essential for the Winemaster to work properly. Adequate insulation helps to obtain the stability of the temperature and the humidity.

The board on the next page (choice of insulati) can be used to determine the type and the thickness of insulation needed according to the internal volume of the cellar and a cellar temperature of 12°C.

Insulation continuity :

Insulating components must be assembled preferably by interlocking panels or glueing the panels together, to ensure perfect continuity of insulation.

This is very important: it prevents heat and humidity entering from the outside which would counter the effects of regulation..

IMPORTANT

The validity of the WINEMASTER guarantee depends on the values in the "Choice of insulation" table being strictly respected, for all the cellar walls, including floor and ceiling + door, as well as perfect continuity of insulation and installation in accordance to the user guide.

CHOICE OF WINEMASTER AND INSULATION**WINEC50IN**

		MINIMUM THICKNESS OF INSULATION (mm) for 12°C cellar temperature		
CELLAR VOLUME (m³)	MINIMUM THERMAL RESISTANCE	EXPANDED POLYSTYRENE	EXTRUDED POLYSTYRENE	POLYURETHANE FOAM
	R : m² . °C/W	$\lambda = 0.044\text{W/m}^\circ\text{C}$	$\lambda = 0.030\text{W/m}^\circ\text{C}$	$\lambda = 0.025\text{W/m}^\circ\text{C}$
14	0,94	50	30	30
16	1,08	50	40	30
18	1,21	60	40	40
20	1,35	60	40	40
22	1,48	70	50	40
24	1,62	80	50	50
26	1,75	80	60	50
28	1,88	90	60	50
30	2,02	90	60	60
32	2,15	100	70	60
34	2,29	110	70	60
36	2,42	110	80	70
38	2,56	120	80	70
40	2,69	120	90	70
42	2,82	130	90	80
46	2,96	130	90	80
50	3,23	150	100	80

1.2.2 WALL AND CEILING INSULATION

The manufacturers propose their insulating panels in several forms:

- insulation alone
- complexes: the insulation is lined with a facing (plaster, mineral...)
- sandwiches: the insulation is lined on each side with a wooden or plaster panel.

The panel facing is important: *it protects the insulation from shocks and guarantees long life.*

Do not use mineral fibre insulation (Glasswool, stonewool,...) because it stores humidity and loose its insulation capacity.

Protection against rodents

Some insulating materials are damaged by rodents (mice, rats...). It is therefore essential to make sure that the walls of the cellar do not contain holes which would allow rodents access to the insulation. This insulation must be lined, on the inner surface of the cellar, with a protective facing. Polyurethane insulation, because of its chemical composition, is not attacked by rodents.

1.2.3 FLOOR INSULATION

The cellar floor must be able to support shelves and the wine stored on them. You should therefore choose an insulating material with adequate compression resistance for this part. Manufacturers recommend appropriate insulation or materials designed specifically for floor insulation, in their documentation.

Puncture resistance (feet of shelves in particular) is provided:

- by using "*complex*" *insulation panels* lined, on the upper surface, with a strong panel.
- by *facing the insulation with a panel of chipboard* (approx. 15 mm thick), or any other suitable covering (plaster and slab, for example).

1.2.4 THE DOOR

It is part of the continuity of insulation.

There are two possible solutions:

- to insulate the existing door using the same type as insulation as was used for the cellar walls. Insert a seal such as foam, between the door panel and the frame, all around the edge.
- use a FONDIS ISOTHERMAL DOOR, lined with polyurethane foam. It includes a seal around its periphery, with a magnetic closure.

1.2.5 INSULATION OF OTHER ITEMS

A fridge or another appliance producing heat must not be placed inside the cellar. For example, any hot water pipe going through the cellar must also be insulated.

2. INSTALLING THE WINEMASTER AIR-CONDITIONER IN THE WINE CELLAR

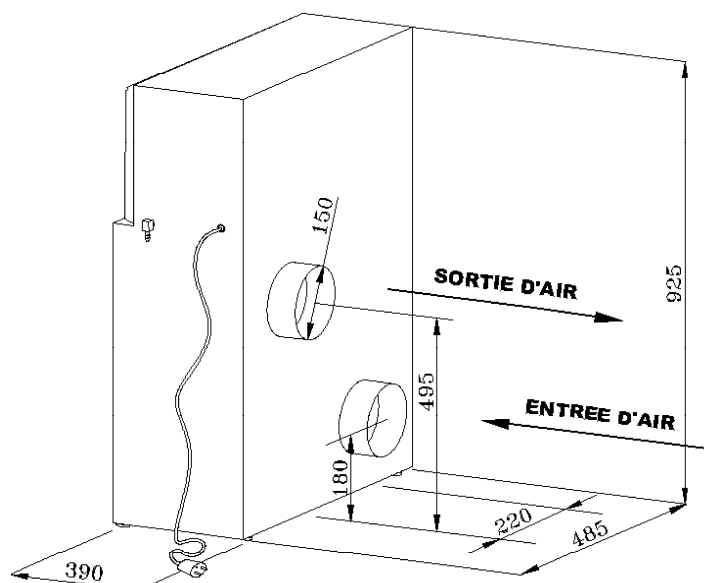
Make sure you have chosen the best place for fitting the air-conditioner.

- chose the best place in order that the length of the flexible ducts will be shorter as possible,
- put the wine cellar on the ground or on his horizontal support,
- there should not be any obstacle in front of the ventilation grid, to facilitate air flow,
- the support or floor must be level and not transmit vibrations.

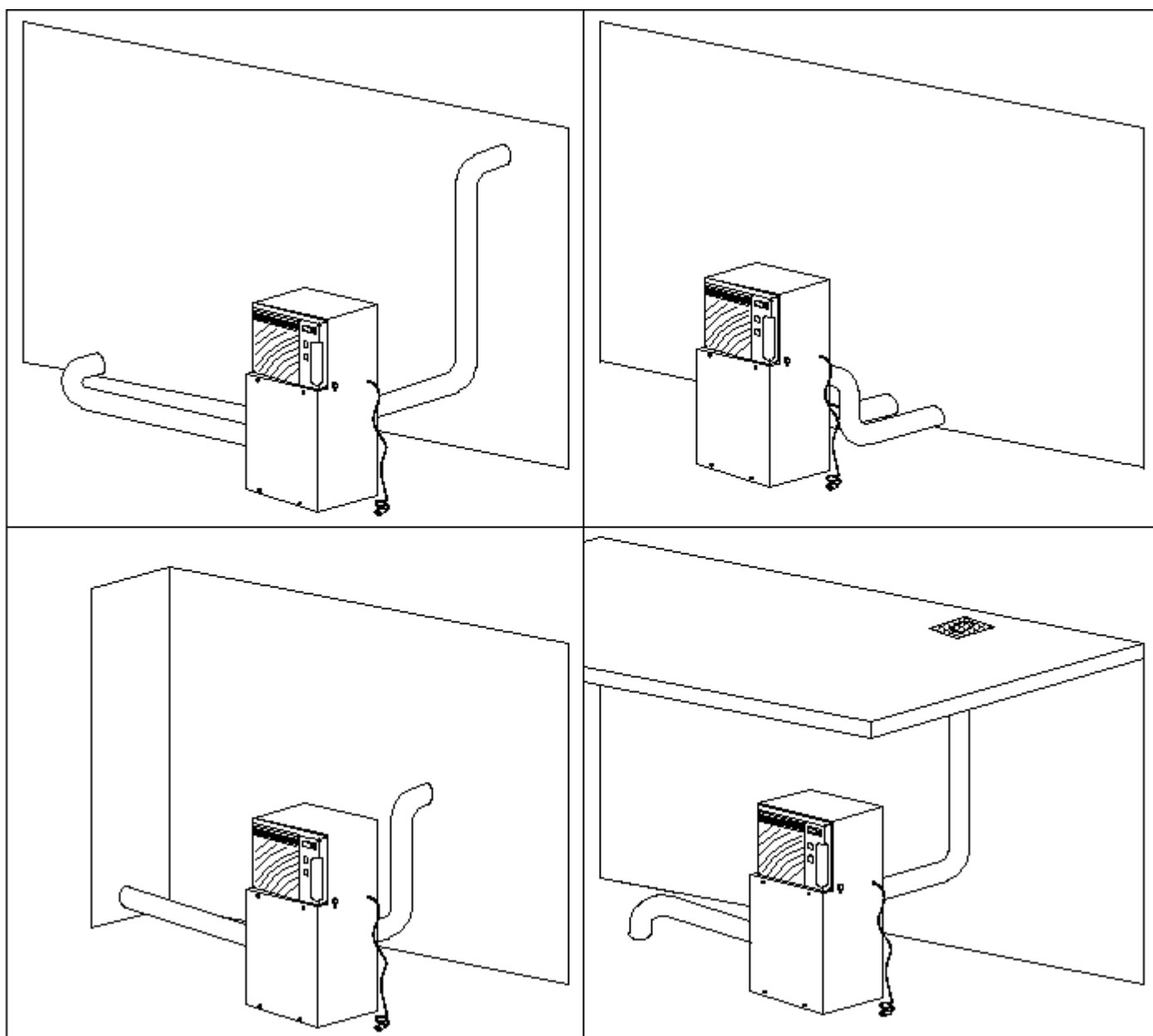
2.1 DRILLING THE WALL

- Draw the grid's site on the wall which divide the wine cellar to the reject indoor.
- Pierce 2 holes Ø 160 mm.
- Install the 2 grids in the wall.
- Connect the duct at the back of grids (§ 2.3).
- The seal between the ducts and the insulation must be filled (with polyurethane foam for example).

2.2 DIMENSIONS



2.3 INSTALLATION EXAMPLES



2.4 INSTALLING THE DUCTS

The connections must be sealed to prevent condensation forming on the walls of the air-conditioner.

Place the inside duct on the flue collar	Stick the adhesive tape across the flue collar and the duct.	Take it round several times to ensure a good seal.
Position the insulation duct then the ring clamp.	Close the head of the ring clamp after tightening it manually.	Screw up the ring clamp and repeat the operation on the other flue collar.

2.5 INSTALLING THE WATER FLUE

Screw the bend, supplied with the equipment, on the right side of the device.	Slide on the PVC tubing.	Connect the free end of the PVC tubing to a wastewater point or retention tank. Avoid "counter-slopes" or "siphons".

Important : Wait for 24 hours before switching the air-conditioner on.

3. USING THE WINEMASTER C50 IN AIR-CONDITIONER

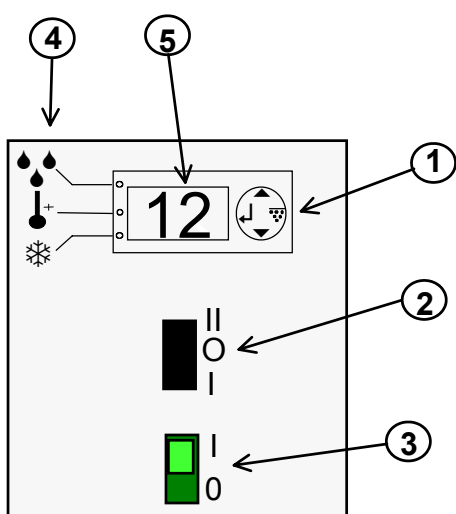
3.1 CONNECTING THE AIR-CONDITIONER

Connect the male plug to a 230V / 16A power socket. Switch on the air-conditioner by pressing **button 2** on the diagram below. The fan on the cellar side comes on immediately. The compressor may not come on until 2 minutes later if the temperature in the cellar is higher than the set temperature. If the cellar temperature matches the thermostat setting, the compressor will not come on.

If you want a setting temperature more quickly, you can press button 2 on position II. In this case, the speed of air circulation increases and the wine cellar will reach nominal power.

For the cellars with a volume higher than 20m³ (this volume could change according to the insulation condition). It is advisable, specially during heat period, to always remain with position II.

3.2 CONTROL PANEL



The air-conditioner is equipped with an electronic thermostat fitted to the front of the device so that the operating status of the **WINEMASTER** can be seen at any time from inside the cellar.

The thermostat permanently displays the temperature of the air in the cellar which varies in range of 2 °C. The variation of the air temperature carries a smaller variation than the wine's one due to the thermal inertia of the liquid.

The thermostat has been set by factory at 12°C. When you start the cellar wine, you should verify and, if need, modify the temperature following instructions below.

The I/O On/Off button (**ref. 2**) is used to switch the air-conditioner on and off and to select the ventilation speed in the cellar.

The IO button (**ref. 3**) with a green light, indicates that the unit is on and is used to switch on the integral lighting.

The diodes situated on the left side (**ref. 4**) from the thermostat are indicating that the air-conditioner is defrosting, heating, or frosting.

The integral lighting permanently displays the temperature in the cellar and current functions. The diodes on the left (**ref. 4**) of the thermostat show whether the air-conditioner is defrosting 🔥, heating ⬆, or cooling ❄.

The thermostat is equipped with a joystick on the right (**ref. 1**) for changing settings or manual defrosting.

To change the setting, simply press the symbol ⬇ for 5 seconds. The display (**ref. 5**) then displays **SET**. Press the symbol ⬇ again briefly. The set temperature is displayed.

To increase it, press the up arrow ▲. To reduce the setting press the down arrow ▼. When the temperature setting is correct, press ⬇ until the display again displays **SET**.

After changing the setting, the compressor will only come on after a few minutes, because of a device which prevents it from starting up too often.

3.3 AUTOMATIC DEFROST

The program of the thermostat will run an automatic defrost time several times a day.

During this position, the compressor cannot start. Only the fan in the cellar can function.

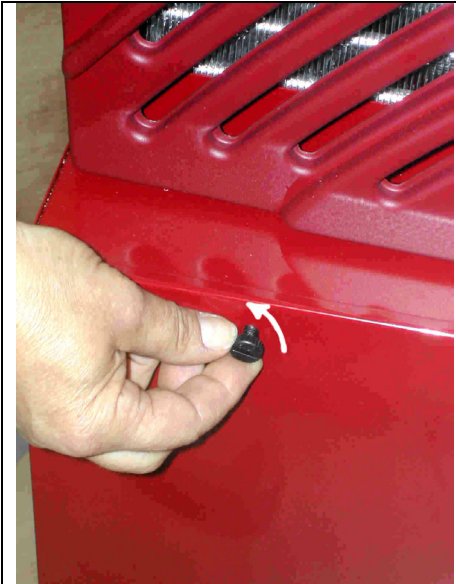
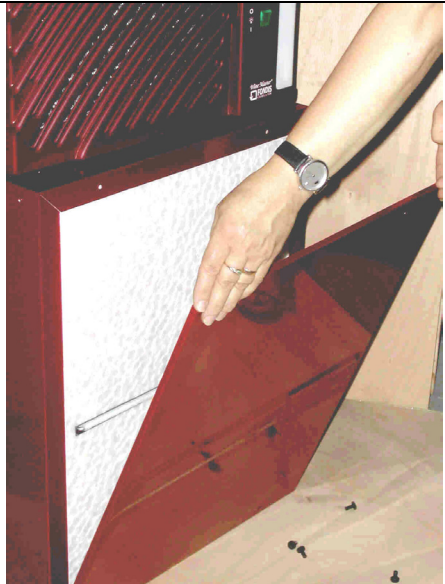
The condensate water produced during this period will be evacuated through the tube

4 . SERVICING THE WINEMASTER AIR-CONDITIONER

THE DUST FILTER

It is essential to replace the dust filter **in the air-conditioner** as soon as necessary and **at least once a year**. If it is clogged, the air-conditioner could be seriously damaged.

4.1 CHANGING THE FILTER

		
Unscrew the four black plastic screws on the front of the air-conditioner.	Remove the cover.	Pull the tab to release the filter.

Replace it with a FONDIS filter only!

You can then replace the cover.

5. GUARANTEE

5.1. 2 YEAR CONTRACTUAL GUARANTEE

The air-conditioner is guaranteed for two years against manufacturing defects.

During the contractual guarantee period, FONDIS will replace any part recognized as defective, following the intervention of a qualified representative.

In the event of an electrical breakdown, FONDIS will replace any part recognized as defective following the intervention of a qualified stockist or his representative.

In the event of cooling system breakdown, FONDIS can ask for the part to be returned for repair following the intervention of a qualified representative. The equipment will be packed and held available for the FONDIS carrier to collect it.

Operations and returns must be made with the written agreement of FONDIS after sales service.

5.2. TERMS OF APPLICATION OF THE GUARANTEE

The contractual guarantee applies to all devices installed and used in accordance with the "Installation and operating guide". Application of the contractual guarantee depends on the guarantee card at the back of the booklet being returned within 15 days of purchase.

5.3. EXCLUSIONS AND LIMITS OF GUARANTEE

The guarantee is refused in the following cases:

- *The cellar and installation have not been insulated in accordance with this guide.*
- *The damage is due to negligence, poor maintenance, defective or inappropriate use of the WINEMASTER.*
- *Part exchanges or replacements under guarantee will not have the effect of extending it.*

FONDIS SA cannot be held responsible, under any circumstances, for the direct or indirect consequences of the air-conditioner's failure to function. The guarantee is limited only to the product supplied by FONDIS SA.

**F**

CERTIFICAT DE GARANTIE WINEMASTER FONDIS

Pour valider votre garantie contractuelle de 2 ans conformément aux conditions de garantie précisées dans le guide d'utilisation,

**merci de nous retourner ce bon dûment rempli
dans les 15 jours suivant votre achat.**

Pour renvoyer votre bon de garantie à FONDIS, il vous suffit de le mettre dans une enveloppe sans l'affranchir à l'adresse suivante :

FONDIS SA
LIBRE REPONSE 90010
68804 THANN Cédex

CACHET DU POINT DE VENTE

- ♦ TYPE
- ♦ N° DE SÉRIE
- ♦ DATE D'ACHAT
- ♦ DATE D'INSTALLATION
- ♦ INSTALLATEUR

NOM PRÉNOM

ADRESSE

CODE POSTAL VILLE PAYS

Nous vous remercions de nous préciser ci-dessous les conditions d'installation de votre climatiseur de cave.

Caractéristiques de l'isolation

Volume climatisé : m³

	Descriptif matériaux et épaisseur	Type d'isolant et épaisseur
Mur		
Sol		
Plafond		
Porte		

Comment avez-vous connu le Winemaster FONDIS ?

- ☐ Par le revendeur ☐ Par une foire ☐ Par un article rédactionnel ☐ Par la publicité
- ☐ Autre (à préciser) :

**D**

GARANTIESCHEIN FÜR WINEMASTER FONDIS

Damit Ihre vertragliche 2-Jahres-Garantie wirksam werden kann, müssen Sie gemäß den in der Gebrauchsanleitung beschriebenen Bedingungen diesen Garantieschein ausfüllen und innerhalb von 2 Wochen nach dem Kaufdatum an FONDIS einsenden.

Sie können den Garantieschein in einem frankierten Umschlag an folgende Adresse schicken :

**FONDIS S.A.
F - 68801 THANN CEDEX**

♦ **MODELL**

♦ **SERIENNUMMER**

♦ **KAUFDATUM**

STEMPSEL DES FACHGESCHÄFTES

NAME VORNAME

ADRESSE

PLZ ORT LAND

Bitte, geben Sie hier an, wie Ihre Weinklimaanlage installiert wurde.

Beschaffenheit der Dämmung Klimatisierter Rauminhalt: m³

Materialbeschreibung und Dicke

Art des Dämmstoffs und Dicke

Wände

Boden

Decke

Tür

Wie sind Sie auf WINEMASTER von FONDIS aufmerksam geworden ?

☐ Durch meinen Fachhändler

☐ Auf einer Verbrauchermesse

☐ Durch einen Zeitungsartikel

☐ Durch Werbung

☐ Sonstiges (*bitte erläutern*) :

.....

**GB**

WARRANTY CERTIFICATE FONDIS

In order to validate your 2 year contractual warranty in accordance with the specified warranty conditions stated in the WineMaster user manual, **please complete and return this warranty certificate within 15 days from the date of purchase to the following address:**

**FONDIS S.A.
F - 68801 THANN CEDEX**

Model: _____

Serial number: _____

Purchase date: _____

Installation date: _____

Installer: _____

The volume of your wine cellar in meters squared: _____

POINT OF SALE STAMP

FIRST NAME _____ LAST NAME _____

ADDRESS _____

POSTAL CODE _____ CITY _____ COUNTRY _____

In the following section, please specify the insulation characteristics of your cellar.

	Type of material and thickness	Type of insulation and thickness
Wall		
Floor		
Ceiling		
Door		

How did you learn about FONDIS WineMaster cellar air conditioning systems ?

☐ through a trade show ☐ through a vendor

☐ through an editorial article ☐ through an advertisement

☐ other (please specify) _____

